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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/869,365	09/25/2001	Mats Boman	GOTEP044	3983
21121	7590	06/03/2004	EXAMINER	
OPPEDAHL AND LARSON LLP P O BOX 5068 DILLON, CO 80435-5068			GUHARAY, KARABI	
			ART UNIT	PAPER NUMBER
			2879	

DATE MAILED: 06/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/869,365

Applicant(s)

BOMAN ET AL.

Examiner

Karabi Guharay

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on RCE, filed on 23 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 18-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 18-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 23 March 2004 has been entered.

Amendment of claim 24 overcomes the rejection of claims 24-27, presented in previous final rejection.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 18-21, 24, 26-29, 32, & 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haas (US 4407849) in view of Aikawa et al. (US 5296011).

Regarding claims 18, 21, 26 & 28, Haas et al. disclose a gas discharge tube (sealed surge limiter, see Fig 1) comprising at least two electrodes (11 and 12) and at

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least one hollow insulator (13), wherein the chemically inert surface (graphite coating 21) has been arranged onto the electrodes (lines 39-64 of column 2) using coating material graphite.

But Haas fail to disclose that the chemically inert surface being applied to the electrodes using a physical vapor deposition or a chemical vapor deposition..

However, Aikawa et al. disclose formation of chemically inert carbon coating by chemical vapor deposition method. Aikawa further teaches that chemical vapor deposition process is advantageous in terms of coating speed and the quality of the deposited layer (lines 17-24 of column 1).

Thus it would have been obvious to one having ordinary skill in the art at the time the invention was made to use chemical vapor deposition process for depositing chemically inert coating, in order to improve coating speed as well as quality of the deposited layer.

Regarding claims 19-20, 24, Hass discloses that the coating material is selected from carbon, where carbon is present as a polymorph of carbon (graphite, lines 63-64 of column 2).

Claim 29 recites the same limitations of claim 19. Thus claim 29 is rejected as claim 19 (see rejection of claim 19).

Claim 32 recites the same limitations of claim 20. Thus claim 32 is rejected as claim 20 (see rejection of claim 20).

Regarding claim 27, and 36, Haas discloses that the thickness of the carbon layer is 1.5 micron (lines 11-12 of column 12), instead of claimed thickness of 1 micron.

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However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to obtain thickness of 1 micron, since it has been held that discovering an optimum value of a result, effective variable involves only routine skill in the art.

Claims 22-23, 25, 30-31, and 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haas et al. (US 4407849) & Aikawa et al. (US 5296011) as applied to claims 18 & 28, further in view of Lemelson (US 5349265).

Regarding claims 22, 25, 30, and 33, Hass et al. meet all the limitations of claim 22 and 30, except for a metal in addition to carbon. However, Lemelson discloses electrodes for a spark plug (Fig 2) having coating of diamond and also discloses coating of metal (lines 10-33 of column 1) in order to further protect electrodes from erosion and corrosive effect during discharge.

Thus it would have been obvious to one having ordinary skill in the art at the time the invention was made to include metal coating with the carbon coating on the electrode, since this will provide better protection of the electrodes of the gas discharge.

Regarding claims 23, and 31 Lemelson discloses that the metal is titanium or chromium (line 31 of column 1).

Regarding claims 34 & 35, Lemelson discloses that the carbon layer is deposited using sputtering in an atmosphere of methane (lines 52-56 of column 6).

#### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karabi Guharay whose telephone number is (571) 272-2452. The examiner can normally be reached on Monday-Friday 8:30 am - 5:00 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar D. Patel can be reached on (571) 272-2457. The fax phone number for the organization is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Karabi Guharay*  
Karabi Guharay  
Patent Examiner  
Art Unit 2879